

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A21C1/10 B01F15/00

According to International Patent Classification (IPC) or to both national classification and IPC

# B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01F A21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, WPI Data, EPO-Internal

# C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 556 198 A (DICKSON JR THOMAS D ET AL) 17 September 1996 (1996-09-17) abstract column 1, line 42 - line 61 column 2, line 40 - column 3, line 17 column 5, line 55 - column 6, line 44 column 6, line 55 - line 67 claims 1,10-12; figures ---	1-42
X	US 5 472 273 A (FOWLER EDDIE R ET AL) 5 December 1995 (1995-12-05) column 1, line 28 - column 2, line 14 column 3, line 33 - line 40 claims 1,2,5,13,14,16; figures 1-2C ---	1-42
X	DD 217 697 A (UNIV BERLIN HUMBOLDT) 23 January 1985 (1985-01-23) the whole document ---	1-42
	--- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

20 November 2001

Date of mailing of the international search report

03/12/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Jensen, K

C.(Continuation) DOCUM 3 CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 747 690 A (HAYASHI TORAHIKO) 31 May 1988 (1988-05-31) column 1, line 42 -column 2, line 41 claims 1,2; figures ----	1-8,13, 14,19-42
A	US 1 279 143 A (C. J. PATTERSON) 17 September 1918 (1918-09-17) page 1, line 15 - line 20 page 1, line 41 - line 53 page 1, line 57 - line 67 claims; figure ----	1,19
A	PATENT ABSTRACTS OF JAPAN vol. 017, no. 364 (C-1081), 9 July 1993 (1993-07-09) & JP 05 056744 A (SHOKUHIN KIKAI KIBAN GIJUTSU KAIHATSU KK), 9 March 1993 (1993-03-09) abstract ----	1,19
A	DATABASE WPI Section Ch, Week 198645 Derwent Publications Ltd., London, GB; Class D21, AN 1986-296069 XP002183514 & JP 61 219333 A (SYST SOGOKAIHATSU K), 29 September 1986 (1986-09-29) abstract -----	1,19

Patent docu cited in search report		Publication date	Pate member(s)	Publication date
US 5556198	A	17-09-1996	US 5380086 A	10-01-1995
			US 5655834 A	12-08-1997
US 5472273	A	05-12-1995	NONE	
DD 217697	A	23-01-1985	DD 217697 A1	23-01-1985
US 4747690	A	31-05-1988	JP 1696980 C	28-09-1992
			JP 3067653 B	23-10-1991
			JP 62104538 A	15-05-1987
			AT 86073 T	15-03-1993
			AU 573992 B2	23-06-1988
			AU 6448686 A	14-05-1987
			CA 1273696 A1	04-09-1990
			CN 86107130 A , B	29-04-1987
			DD 252310 A5	16-12-1987
			DE 3687880 D1	08-04-1993
			DE 3687880 T2	24-06-1993
			EP 0221759 A2	13-05-1987
			ES 2038967 T3	16-08-1993
			KR 8904700 B1	25-11-1989
			US 4790665 A	13-12-1988
US 1279143	A		NONE	
JP 05056744	A	09-03-1993	JP 2708650 B2	04-02-1998
JP 61219333	A	29-09-1986	JP 1031852 B	28-06-1989
			JP 1789185 C	29-09-1993